DOCUMENT RESUME

ED 048 487 08 VT 012 705

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TITLE	Testing of the Guidance Program. Project ABLE: Development and Evaluation of an Experimental Curriculum for the New Quincy (Mass.) Vocational-Technical School.
INSTITUTION	American Institutes for Research, Pittsburgh, Pa.; Quincy Public Schools, Mass.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
REPORT NO	IR-18
BUREAU NO	BR-5-0009
PUB DATE	Sep 70
CONTRACT	OEC-5-85-019
NOTE	45p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	*Educational Guidance, *Guidance Programs, Junior High Schools, Occupational Choice, *Occupational Guidance, Post Testing, Pretesting, *Program Evaluation, *Vocational Education
IDENTIFIERS	*Project ABLE, Project Able Career Development Inventory

ABSTRACT

The Project ABLE Guidance Program was designed to prepare junior high school students for making an appropriate and stable choice of a high school program. To determine the success of the program, an experimental and a control group were administered the Project ABLE Career Development Inventory prior to and after implementation of the guidance plan. The results of the testing program were inadequate, with many inconsistencies occurring in the data and on the student score sheets. Serious questions can be raised about proper administration of the pre- and posttest and use of the student kit materials, required reference, and multi-media support materials. Funds for the support of staff for the proper revision of the student kit materials have not been readily available. It is felt that further refinement of the materials and administrative procedures, better implementation, and a more exhaustive investigation of student performance will lead to more positive results. The Career Development Inventory and summary of test scores are appended. Related reports are available as ED 024 752 and ED 024 767. (Author/SB)

ED 048487

EIGHTEENTH TECHNICAL REPORT

Project No. 5-0009

Contract No. OE-5-85-019

Project ABLE

DEVELOPMENT AND EVALUATION OF AN EXPERIMENTAL CURRICULUM FOR THE NEW QUINCY (MASS.) VOCATIONAL-TECHNICAL SCHOOL

Testing of the Guidance Program

September 1970

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

VT 012 705

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The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

American Institutes for Research
Pittsburgh, Pennsylvania

and

Quincy Public Schools
Quincy, Massachusetts

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FOREWORD

This document reports on the test of materials for the Project ABLE Vocational Guidance Plan for Junior High School Students, conducted during the 1968-69 school year at five junior high schools in the Quincy area.

Rather than present a digest of the background, history, and development of the Project ABLE Guidance Program, this report will limit itself to a brief synopsis of the first formal test of the effectiveness of the guidance curriculum. The Fourth Quarterly Technical Report (31 March 1966) presents the general vocational objectives and the details of program planning and development. The Ninth Quarterly Technical Report (30 June 1967) presents the plans for program implementation, revision, and evaluation. Although Appendix G consisted of the Educational and Vocational Inventory to be used as an instrument for program evaluation, important changes, directed primarily toward shortening the inventory and clarifying many of the questions, were made before the inventory was administered. The inventory actually used is reproduced as Appendix A to this report.

ABSTRACT: Project ABLE

USOE Project No. 5-0009
Contract No. OE-5-85-019

A Joint Research Project of: Public Schools of Quincy, Massachusetts and American Institutes for Research

Title: DEVELOPMENT AND EVALUATION OF AN EXPERIMENTAL CURRICULUM FOR THE NEW QUINCY (MASS.) VOCATIONAL-TECHNICAL SCHOOL

Objectives: The principal goal of the project is to demonstrate increased effectiveness of instruction whose content is explicitly derived from analysis of desired behavior after graduation and which, in addition, attempts to apply newly developed educational technology to the design, conduct, and evaluation of vocational education. Included in this new technology are methods of defining educational objectives, deriving topical content for courses, preparing students in prerequisite knowledges and attitudes, individualizing instruction, measuring student achievement, and establishing a system for evaluating program results in terms of outcomes following graduation.

Procedure: The procedure begins with the collection of vocational information for representative jobs in eleven different vocational areas. Analysis will then be made of the performances required for job execution, resulting in descriptions of essential classes of performance which need to be learned. On the basis of this information, a panel of educational and vocational scholars will develop recommended objectives for a vocational curriculum which incorporates the goals of (1) vocational competence; (2) responsible citizenship; and (3) individual self-fulfillment. A curriculum will then be designed in topic form to provide for comprehensiveness and also flexibility of coverage for each of the vocational areas. Guidance programs and prerequisite instruction to prepare junior high students will also be designed. Selection of instructional materials, methods, and aids, and design of materials, when required, will also be undertaken. An important step will be the development of performance measures tied to the objectives of instruction. Methods of instruction will be devised to make possible individualized student progression and selection of alternative programs, and teacher-training materials will be developed to accomplish inservice teacher education of Quincy School personnel. A plan will be developed for conducting program evaluation not only in terms of end-of-year examinations, but also in terms of continuing follow-up of outcomes after graduation.

REPORT SUMMARY

The Project ABLE Guidance Program was designed to prepare junior high school students for making an appropriate and stable choice of high school program. The guidance plan was implemented with over 4000 students in Quincy. Experimental and control groups were established to assess the effectiveness of the new program and materials.

Generally speaking, the results of the testing program were inadequate, with many inconsistencies occurring in the data and on the student score sheets. Serious questions can be raised about proper administration of the pre- and posttest, the proper use of the student kit materials, the proper use of the required reference and multi-media support materials, the premature city-wide testing of materials in need of editorial change (e.g., reading level too high), and other factors.

Funds for the support of staff for the proper revision of the student kit materials have not been readily available. However, the set of twelve Occupational Analysis reference manuals are more functional at this stage of development, and are considered valuable; their continued use is assured by the Quincy guidance staff. On the other hand, it is recommended that the student kit booklets for grades 7, 8, and 9 not be reprinted until appropriate revisions and modifications can be accomplished. It is felt that further refinement of the materials and administrative procedures, better implementation, and a more exhaustive investigation of students' performance are sure to lead to more positive results. It is strongly recommended that the effort to build on the foundation of the present program be continued, enabling the full potential of the basic research and development to be realized.

INTRODUCTION

The procedure for development of the vocational guidance program for junior high school students included the following seven major steps, for each of which a brief summary is given:

1. Describe the guidance program as it now exists in the Quincy Public Schools. A complete analysis of the guidance program was performed and resulted in a description which was documented in the first quarterly technical report. (American Institutes for Research, 1965)

2. Define specific objectives and requirements for a guidance program adequate to the new school program. Guidance program objectives were identified as follows (See the Fourth and Ninth Quarterly Technical Reports):

    1. Identifies the immediate and future goals of each student.
    2. Periodically evaluates each student with respect to characteristics important for the selection and achievement of goals.
    3. Identifies and informs the student about the educational and vocational opportunities available to him.
    4. Identifies and informs the student about the conditions and requirements of each available opportunity.
    5. Analyzes the consistency among student goals, capabilities and interests, and student educational and vocational opportunities.
    6. Together with the counselor, selects realistic courses of action.
    7. Adjusts decisions as conditions change in the individual or in his opportunities.
    8. Evaluates program effectiveness in terms of student outcomes.

3. Define a plan for meeting each program objective. Priority in the development of guidance plans was given to the junior high program in order to provide guidance, beginning in September, 1966, for the ninth grade students who were eligible for the first class in the new school. Plans were then developed for the eighth and seventh grade materials.

4. Develop plan for training counselors and teachers. Detailed knowledge of such facts as the vocational areas and occupations for which training would be offered, of the instructional procedures to be employed, of the requirements to be imposed on students, and of the levels of skill to which students could aspire in each program, was considered while developing the training plan.

5. Develop materials to support staff training and the guidance program. A Counselor Handbook was prepared. All counselor activities, by grade, were specified in the Handbook. Meetings were held with the guidance staff to assure counselor understanding of his/her role in the new guidance program.

6. Install and try out guidance programs. Initial junior high tryout was conducted during the 1966-67 school year. Senior high tryout began with opening of the new school in September, 1967. Revision and tryout occured again in 1968.

7. Program evaluation. Guidance program evaluation was planned as an integral part of the total program evaluation, preparation for which began in March, 1967. Evaluation statistics were gathered and computer processed for an evaluation effectiveness report.

The general vocational objectives are summarized as follows:

I. CHOOSING A CAREER

A. Making a Realistic Choice

1. Self-evaluation
2. Evaluation of world of work
3. Combining knowledge of self and world of work — making tentative and general choices

B. Accepting the Consequences of Career Choice

1. Accepting the success and failure criteria
2. Accepting career hierarchies and vertical mobility limits
3. Accepting the social statuses associated with an occupation
4. Accepting duties and task requirements associated with an occupation
5. Demonstrating sensitivity to common satisfactions and dissatisfactions of an occupation
6. Accepting personal and family demands associated with an occupation

7. Accepting the roles of management, labor organizations, and government with respect to given occupations and to the economy

8. Accepting the environments, contexts, and settings of an occupation

C. Planning for Contingencies

1. Providing for technological change

2. Accounting for social and economic trends

3. Providing for educational and occupational failure

II. FORGING A CAREER

Preparing for a Career

1. Can identify realistic educational and training plans for a given occupation

2. Can assess ability to obtain financial aid for educational purposes

3. Learning critical requirements for a given occupation

The Project ABLE Guidance Program was designed to prepare junior high school students for making an appropriate and stable choice of high school program. The plan was intended to provide the student with information about himself, about occupational opportunities, and about the common educational routes to these opportunities. It was also intended to provide a systematic procedure for reaching decisions. It was intended that each student assume as much responsibility as he can for the decision making that will be required of him in vocational planning.

In each junior high school year, it was planned that the student would go through the same step-by-step procedures of gathering data, analyzing it in light of what he knows about himself, and making a tentative choice among the educational programs and vocational goals available to him. The procedures became more thorough and more specific each year. It was intended that the student be able to use both the information he acquired and the problem-solving technique he developed, in the continual process of vocational evaluation and choice.

RESEARCH DESIGN

The two major technical reports on the Guidance Program (Fourth and Ninth Quarterly Technical Reports) describe in more detail the methodology and mechanics of development and testing. Therefore, only limited description and discussion need be presented in this brief document.

Research Hypotheses

1. The students who participate in a junior high school experimental guidance program acquire educational and vocational decision-making capabilities not normally acquired by junior high school students.

2. Students participating in the experimental program experience greater success in selecting high school course work and express a greater degree of course satisfaction.

Procedure

The Project ABLE Career Development Inventory was administered to a random sample of seventh, eighth, and ninth grade students from all junior high schools in Quincy and to a random sample in one junior high school of a neighboring community. The pretest was administered in September, 1968. The students from the neighboring community, who acted as the control group, participated in the regular academic and guidance programs prescribed for their grades in their school. The Quincy students, the experimental group, participated in the Project ABLE guidance program. (Details of program development with sample student materials and plans for the testing program were presented in the Ninth Quarterly Technical Report.) In June, 1969, the same inventory was administered to the same students. Usable data was obtained for 264 students in the control group and 311 students in the experimental group.

Questions on the Project ABLE Career Development Inventory fall into three general categories:

1. General Vocational Capabilities items, measuring capabilities associated with choosing and forging a career. These 65 items are included as Part I of the inventory; they measure skills in

(a) self-evaluation, (b) evaluation of the world of work, and (c) decision making. These items are coded S, W, and DM, respectively.

2. Selected items from the J.O. Crites Vocational Development Inventory. These true-false items, the first 60 in Part 2 of the inventory, measure vocational maturity.

3. Items designed to determine students' Attitudes and Plans. These items, the last 47 in Part 2 of the inventory, were analyzed individually because the responses are specific to a given student, and cannot be considered "right" or "wrong."

It should be noted that the authors of this report were not involved in the development of the guidance materials, the Career Development Inventory, or the testing program. During the early stages of project activity, many changes occurred among Quincy and AIR staff (see Problems section of the Final Report).

SUMMARY OF RESULTS

Measures of central tendency of control and experimental group scores on the General Vocational Capabilities and J.O. Crites sections of the Career Development Inventory are given in Appendix B. The percent change in score from pretest to posttest for experimental and control groups is tabulated below:

	Experimental Group (Quincy)	Control Group
Self Evaluation	5.04%	11.88%
World of Work	7.04%	19.31%
Decision Making	0.96%	11.05%
Total for General Vocational Capabilities	4.75%	14.32%
J.O. Crites	-1.45%	2.45%

On the Attitudes and Plans portion of the Career Development Inventory were 47 questions designed to measure the student's satisfaction with his junior high school courses, his success in choosing courses relevant to his own personal goals, and the adequacy of his preparation for post-high-school life. Some of the questions were answered by all students; of the remainder, some were answered only by those students planning to enter college, the rest only by those who were planning not to enter college. Because there were no "right" or "wrong" answers to these questions, responses to each item were analyzed separately. The chi square test indicated that the responses of the experimental group showed a greater deviation from the expected mean (the mean of the control group) on the posttest than on the pretest in 68% (32 out of 47) items. Chi squares for pretest scores and posttest scores, by item, are given in Appendix B.

The results of this initial test of the efficiency of the Project ABLE Guidance Program in the Quincy junior high schools cannot be said to be a resounding success. On those parts of the inventory in which a correct response can be defined, the gains in the control group's scores were con-

sistently greater than those in the experimental group's scores. In fact, on one part, the experimental group's mean score on the pretest was greater than its mean score on the posttest. On the part of the inventory in which responses depend on the students' self-perceptions, the experimental group deviated more on the posttest than on the pretest from the expected responses.

Serious questions can be raised about proper administration of the pre- and posttests, the proper use of the student kit materials, the proper use of the required reference and multi-media support materials, the premature city-wide testing of materials in need of editorial changes (reading level too high), and other factors.

DISCUSSION

Two major products were prepared as a result of the research efforts in the Guidance area — the Occupational Analyses and the Student Vocational Plans. An Occupational Analyses for each of the eleven job families, and one for the professions, was prepared. As reference materials for student use, such documents provided a description of the characteristics and requirements of occupations which were included within each job family. Each analysis includes a brief description of the occupation and some of the tasks involved; listings of related and lower level jobs, where applicable, and placement opportunities; indications of the expected employment outlook, hours worked per week, and average earnings; information concerning the high school course of study, educational and training requirements, work conditions and physical demands of the job; relation to data, people, and things; personal interests, aptitudes, and temperament compatible with the occupation. The analyses for each family are arranged according to occupational areas.

The second major product is the Student Vocational Plans for grades seven, eight, and nine. It was the test of these materials on which this report is centered. Each booklet is about 50 pages in length. A primary objective of the vocational guidance plan was to have students participate in activities which require self-evaluation, investigation of the world of work, and matching credentials with available educational and vocational opportunities. For each of the three major areas, a number of activities were delineated for each grade. Materials were also prepared for grades 10, 11 and 12, but completion of development was curtailed by deferment to other priorities. To reiterate, two major reports, the Fourth Quarterly Technical Report and the Ninth Quarterly Technical Report, describe in great detail the research and development in the guidance areas and include sample materials.

The junior high program was implemented with over 4000 Quincy students in grades 7, 8 and 9 during the 1968-69 and 1969-70 school years. The effort was seen as a limited-objective program with the focus on career

decision making. The full-scale testing program revealed one major problem identified but not adequately corrected during pilot testing. The reading level for the student vocational plan kits was too high (7.5 for grade seven, 8.7 for grade eight and 11.2 for grade nine). This is most critical, since research in the area of guidance has shown that the reading level of student materials has a significant effect on proper use of materials and success of the program. (The reading level problem with the ABLE student kit materials was reported in several progress letters to the USOE project contract officer.) Evidently, the set of twelve Occupational Analyses reference manuals are more functional at this stage of development, and their continued use has been assured by the Quincy guidance counselors.

The inconsistent and negative results of the recent application of the Career Development Inventory may be attributable to several factors. The Career Development Inventory itself may not be the optimum instrument for evaluation of program effectiveness. During the course of its development, many sources for possible items were considered. Some of the items finally chosen were abbreviated, or otherwise changed, from their original versions. The final version of the inventory was inadequately field tested for clarity and conciseness with a sample of the population for which it was designed.

As indicated earlier, proper implementation of the guidance program can be questioned. For example, each student activity required the use of specific film and tape sets around which the individualized student experiences were designed. Without the required multi-media aids, it would have been impossible for an individual student to have properly completed each activity. Only one kit or complete set of the film-tape materials was available (for 4000 students) at the beginning of the school year. During the late spring of the test year, additional copies were purchased and one set was provided to each junior high school. Judging from a review of many of the student posttest papers (and the manner in which they were marked), the high reading level, the lack of variety of media, and the difficulties in undertaking and completing the activities (required film-tape materials not available), had no small effect on student attitudes toward the ABLE guidance materials and the posttest. In at least one school, because (evidently) of the inaccessibility of the film-tape materials, the program was presented in

large-group sessions through lectures and group-paced activities.

Other problems which have been identified in the use of the ABLE guidance kit materials include resistance to the "cycling" pattern in which the student repeats many of the same steps each year for three years. (See previous reports for rationale of repeated activities.) Criticism was also found in the volume of materials which the student had to accumulate over the three-year period. Some mechanical problems were evident in working through the sequence of exercises or activities within each kit, and the requirements to review previously recorded information. Problems were also identified in coordinating activities, securing a broad base of commitment and support, and other factors typical of research and school operations.

A modified version of the ABLE guidance program was implemented and tested successfully, according to interim progress reports, at the Clinton, Iowa, Job Corps Center. Termination and cutback of Job Corps programs evidently affected the Iowa Center. Programs at the Center were curtailed early and the sponsors were not able to prepare a final evaluation of the guidance activity.

CONCLUSIONS AND RECOMMENDATIONS

Funds for support of staff for the proper revision of student kit materials have not been readily available. Because several publishers had expressed interest in the reference materials (Occupational Analyses set), a request for proposals was circulated by ABLE offering the entire package for limited copyright under the commercial dissemination plan provided by the Federal government. However, to gain access to the entire package, a publisher would have had to finance the revisions required in the student kit materials. Generally speaking, respondents found the materials to be quite acceptable and of high quality, while expressing dismay at the level of investment required for completion of development and field testing. Thus, the RFP was recently withdrawn. Quincy and AIR may wish to reissue the RFP for the reference material while deleting the student kit materials and the requirement for financial support for final revisions within the student kit materials.

The situation for the guidance program is unfortunate, since the entire effort is so close to fulfillment. Furthermore, the program received a very favorable evaluation from the USOE sponsored Review Panel and has caught the interest of many field experts and visitors to the demonstration programs. However, it is recommended that the student kit materials <u>not</u> be reprinted (costs of which would exceed $2000 each year for Quincy's 4000 junior high students or about 50 cents per child) until appropriate revisions and modifications can be accomplished. Quincy may wish to seek additional support from USOE or other sources for completion of the development in the guidance area.

In practice, the Project ABLE Guidance Program materials have been favorably received by students, parents, teachers, and administrators. This acceptance is impossible to document considering the wide use of the program and the results of the 1968-69 school year testing described by this report. Further refinement of the materials and administration procedures, better implementation, exhaustive investigation of students' performance are sure to yield more positive results. It is strongly recommended that the effort

to build on the foundation of the present program be continued, enabling the full potential of the basic research and development to be realized.

REFERENCES

American Institutes for Research. Project ABLE: First Quarterly Technical Report: Development and Evaluation of an Experimental Curriculum for the New Quincy (Mass.) Vocational-Technical School. Pittsburgh: June, 1965.

American Institutes for Research. Project ABLE: Fourth Quarterly Technical Report: A Vocational Guidance Plan for Junior High School. Pittsburgh: March, 1966.

American Institutes for Research. Project ABLE: Ninth Quarterly Technical Report: Development and Tryout of a Junior High School Student Vocational Plan. Pittsburgh: June, 1967.

APPENDIX A

CAREER DEVELOPMENT INVENTORY

Part 1

Self-Evaluation, World of Work, and Decision Making

Read each item carefully and decide which is the best answer On your answer sheet, fill in the circle under the letter that is the correct answer.

S 1. Which of the following is a way to discover your interests?

a. Look at your experiences.
b. Review your reading preferences.
c. Take an interest inventory.
d. Summarize the things you like.
e. all of the above

S 2. A test percentile tells you

a. the percent of students scoring lower than you.
b. the percent of students taking the test.
c. the percent of students completing the test.
d. the percent of information you learned.
e. the percent of students getting the same score as you.

DM 3. When should you think about changing your goals?

a. when your friends change their goals
b. You should never change your goals.
c. when you get new information about yourself
d. when you are absolutely sure of what you want to do
e. when your achievement remains the same

S 4. Which of the following can affect your school marks?

a. your health
b. the teacher
c. your attendance
d. your effort
e. all of the above

S 5. Which of the following is a statement of a goal?

a. I have a new idea.
b. I think my teacher doesn't understand me.
c. I received a B in English.
d. I am in the 80th percentile in Language.
e. I want to get an A in math.

S 6. How can you tell if an educational goal has been reached?

a. Compare it with other goals.
b. Compare it with the goals of a friend.
c. Look at your school marks.
d. Look at your future goals.
e. It is impossible to tell.

S 7. A test profile tells you

a. your weaknesses only.
b. what you should achieve.
c. your strengths only.
d. your future achievement.
e. your strengths and weaknesses.

S 8. The word <u>aptitude</u> means

a. what you have accomplished.
b. what you are interested in.
c. how you feel about things.
d. what you are capable of doing.
e. what you should not do.

S 9. Which of the following can develop scientific interests?

a. building airplane models
b. drawing and painting
c. selling or delivering newspapers
d. participating in a social club
e. budgeting an allowance

S 10. What can you find out if you compare this year's Standardized Achievement Test results with last year's results?

a. your grades
b. what your teachers think of you
c. your school progress
d. your goals
e. your future achievement

S 11. A section of a test is called a

a. mean.
b. norm.
c. test battery.
d. subtest.
e. rating.

S 12. Keeping a record of your achievements and goals for several years and watching your progress is called a

a. test result.
b. trends analysis.
c. goal change.
d. vocational choice.
e. prediction.

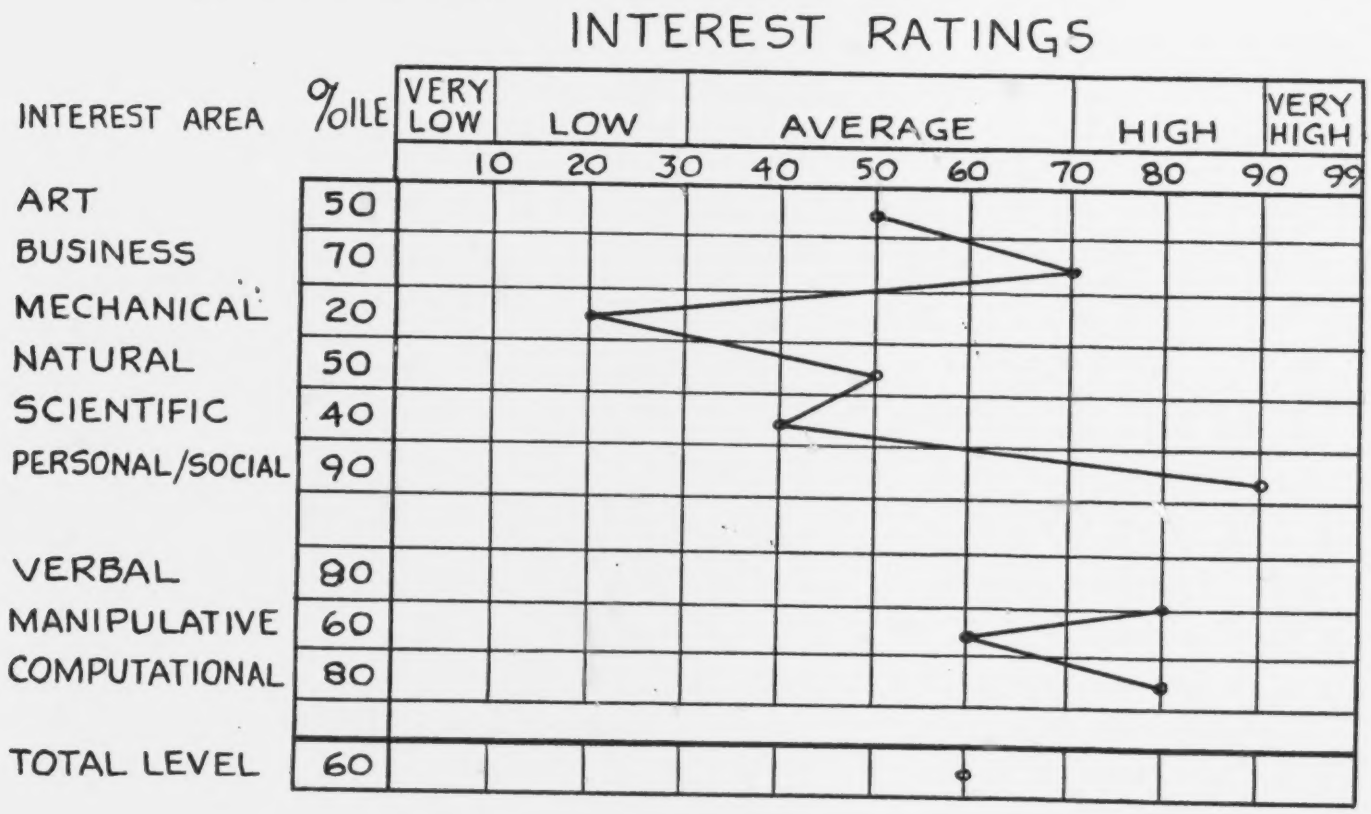
S 13. Goals are

a. statements of what you expect to achieve.
b. statements of what you have done in the past.
c. rules or regulations for you to follow.
d. things you want to avoid.
e. things the counselor wants you to do.

S 14. The average score of a group taking a test is called a

a. norm.
b. percentile.
c. deviation.
d. subtest.
e. profile.

S 15. An interest inventory gave Mary the following results: (Use the chart for questions 15-18.)



Mary's highest interest is

a. art
b. scientific
c. business
d. personal/social
e. natural

S 16. Mary's level of interest is

a. very high.
b. high.
c. average.
d. low.
e. very low.

S 17. At which percentile is Mary's mechanical interest?

a. 20
b. 30
c. 40
d. 60
e. 90

DM 18. What might be a good high school course for Mary?

a. food preparation
b. graphic arts
c. data processing
d. business education
e. machine shop

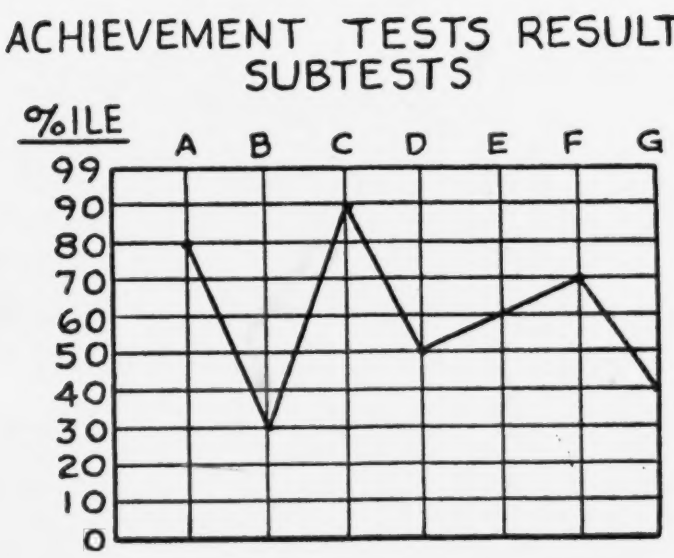
S 19. Which of the following tells you what you have accomplished in school?

a. I.Q. score
b. goal checklist
c. Dictionary of Occupational Titles
d. subject marks
e. none of the above

S 20. If your achievement test results and your grades are at the same level, you are

a. working too hard.
b. not working hard enough.
c. working up to par.
d. working below par.
e. not making any progress.

S 21. An achievement test gave John the following profile. (Use the chart to answer questions 21-24.)



JOHN HAS STRENGTH IN SUBTEST

a. A
b. C
c. D
d. F
e. G

S 22. John has a weakness in subtest

a. A.
b. B.
c. C.
d. E.
e. F.

S 23. John's percentile for subtests A and C is

a. 10.
b. 30.
c. 85.
d. 170.
e. not given.

S 24. In subtest E, what percent of the students scored lower than John?

a. 3
b. 5
c. 25
d. 40
e. 60

S 25. Which statement about goals is true?

a. All people in the same grade should have the same goals.
b. Students should not worry about goals until high school.
c. Each student may have different goals from other students.
d. Goals should not be changed once they are set.
e. Stating goals is not important.

W 26. If you wanted to find out about local job openings, where could you get this information?

a. United States Employment Security Office
b. local Chamber of Commerce
c. school counselors
d. friends and relatives
e. any of the above

W 27. John wants to go into an apprenticeship program. He is talking about

a. avoiding a union.
b. training requirements.
c. salary.
d. social status.
e. poor job.

DM 28. If you want a secure job, which of the following jobs would be <u>most</u> likely to satisfy this goal?

a. actor
b. musician
c. seasonal farm worker
d. postal clerk
e. artist

W 29. If you get promoted because of the time you have spent on the job, the reason for promotion is called

a. ability.
b. seniority.
c. wages.
d. achievement.
e. responsibility.

W 30. Which of the following jobs usually requires graduation from a vocational or technical high school?

a. lawyer
b. civil engineer
c. dietician
d. registered nurse
e. draftsman

W 31. Which of the following jobs requires the <u>longest</u> amount of training?

a. registered nurse
b. machinist
c. lawyer
d. air conditioning mechanic
e. draftsman

W 32. Mary applies for a job as dental technician. What legal requirement must she meet?

a. age
b. goals
c. activities
d. math score
e. aptitude

W 33. John wants to be a salesman. His employer will be interested in his

a. grades.
b. appearance.
c. speech.
d. activities.
e. all of the above.

W 34. If you wanted to find out which jobs will have a lot of openings in the future, where would you get the information?

a. <u>Dictionary of Occupational Titles</u>
b. <u>Occupational Outlook Handbook</u>
c. national census data
d. books of famous people in occupations
e. none of the above

W 35. Which of the following is an example of a job hierarchy?

a. farmer, doctor, mailman
b. carpenter, lawyer, gas station attendant
c. mixer, donut man, pastry chef
d. practical nurse, machinist, bookkeeper
e. sheet metal worker, electrician, dental assistant

W 36. What can you find out from the <u>Dictionary of Occupational Titles</u>?

a. the number of people working in the job
b. salaries
c. job outlook
d. what people do on jobs
e. number of women in the job

W 37. When a new way is discovered to do a job, the old job skills are

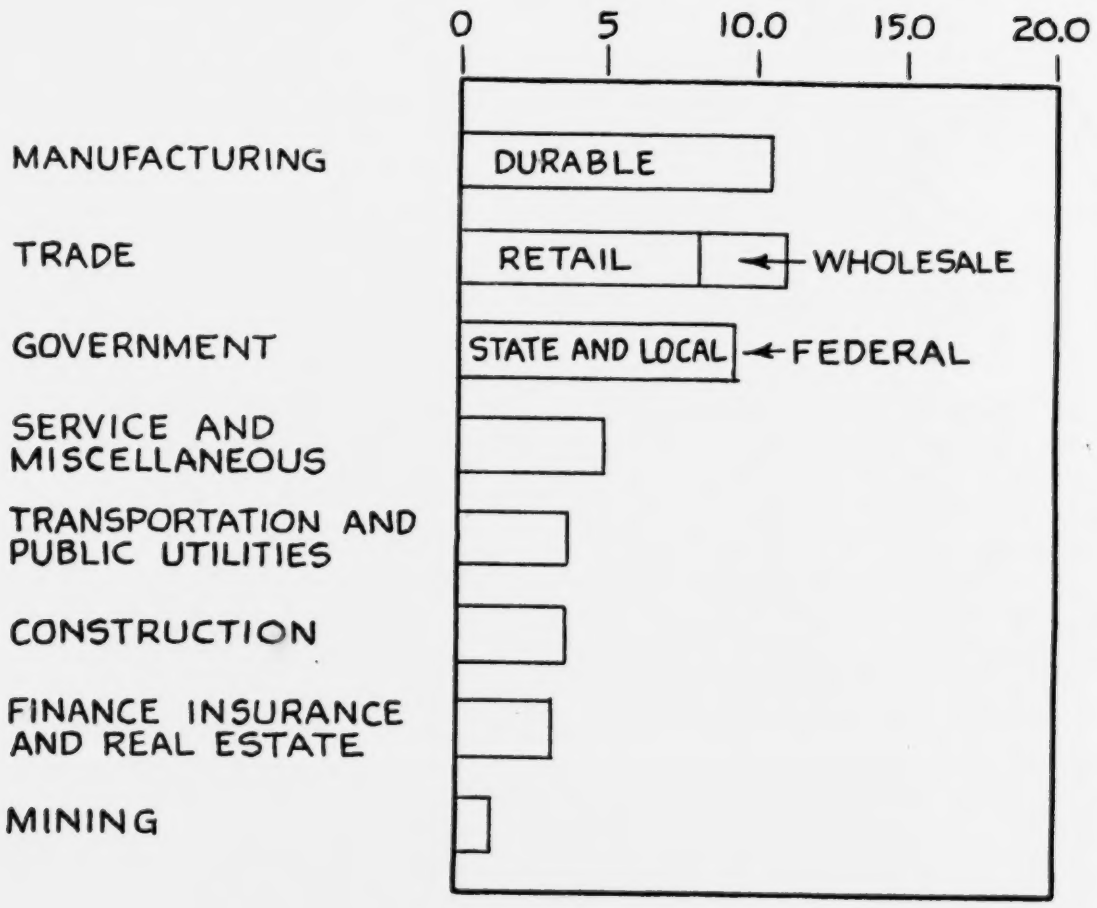
a. harder
b. easier
c. obsolete
d. required
e. demanded

W 38. Which of the following is a cook in a small restaurant most likely to do?

a. serve drinks
b. carve meats
c. make reservations
d. seat customers
e. take customers' orders

W 39. According to the chart below, about how many workers would you say are employed in durable manufacturing?

a. 5 million
b. 7 million
c. 9 million
d. 11 million
e. 17 million



W 40. From the job description below, what information can be obtained about the training necessary for a medical technologist?

MEDICAL TECHNOLOGIST (medical serv.) 078.381--performs chemical, microscopic, and bacteriologic tests to provide data for use in treatment and diagnosis of disease: receives specimens and makes quantitative and qualitative analyses...cuts stains and mounts tissues...groups or types blood.

a. no formal training is necessary
b. training in chemistry and biology is needed
c. training in history is required
d. high school training is sufficient
e. some training in sociology is required

W 41. Who checks oil and water levels in automobiles?

a. a gas station attendant
b. a medical technician
c. a plumber
d. a stationary engineer
e. a petroleum engineer

W 42. Which of the following jobs requires the <u>least</u> amount of training?

a. registered nurse
b. X-ray technician
c. doctor
d. dentist
e. pharmacist

W 43. Which of the following is a job?

a. practical nurse
b. power mechanics
c. health occupations
d. government
e. engineering

DM 44. What would you have to do if automation took over your job?

a. beat the machine
b. work faster
c. learn new skills
d. join a union
e. refuse to work

W 45. From the job description below, what information can be obtained about the skills and abilities needed for secretarial work?

SECRETARY (clerical) 201.368--Girl Friday, Secretarial Stenographer: Schedules appointments, gives information to callers, takes dictation...reads evening mail...composes and types routine correspondence...greets visitors, and conducts visitors to employer...may not take dictation...may supervise clerical workers...answers telephone...files.

a. types
b. operates switchboard
c. dictates letters
d. interviews new employees
e. reads high-level accounting procedures

W 46. From the job description below, which of the following items of information can be obtained?

> CARPENTER (const.) 860.381. Constructs, installs, and repairs structures and fixtures of wood...studies blueprints, sketches, or building plans...assembles materials and fastens them with nails, dowel pins, and glue...may weld metal parts to steel structural members.

a. the age requirements for carpenters
b. the amount of time necessary to perform tasks
c. the major tasks performed by carpenters
d. requirements for union membership
e. the amount of training necessary to become a carpenter

W 47. What is one effect of technological change?

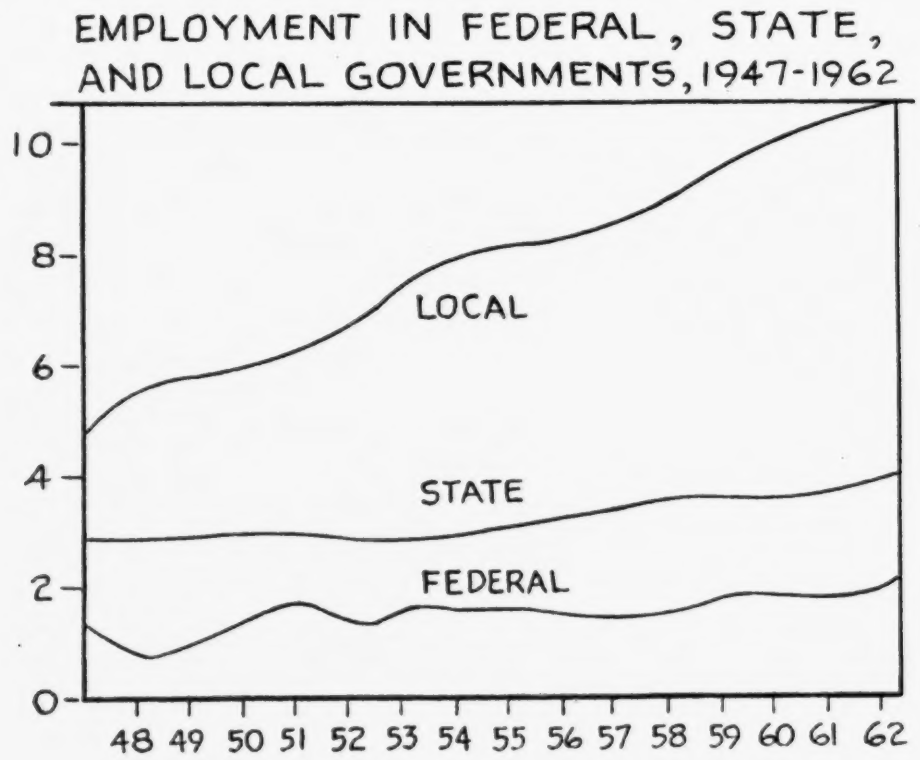
a. fewer technical workers
b. the creation of new jobs
c. less production
d. lower training requirements
e. fewer women workers

W 48. What is one problem created by technological change?

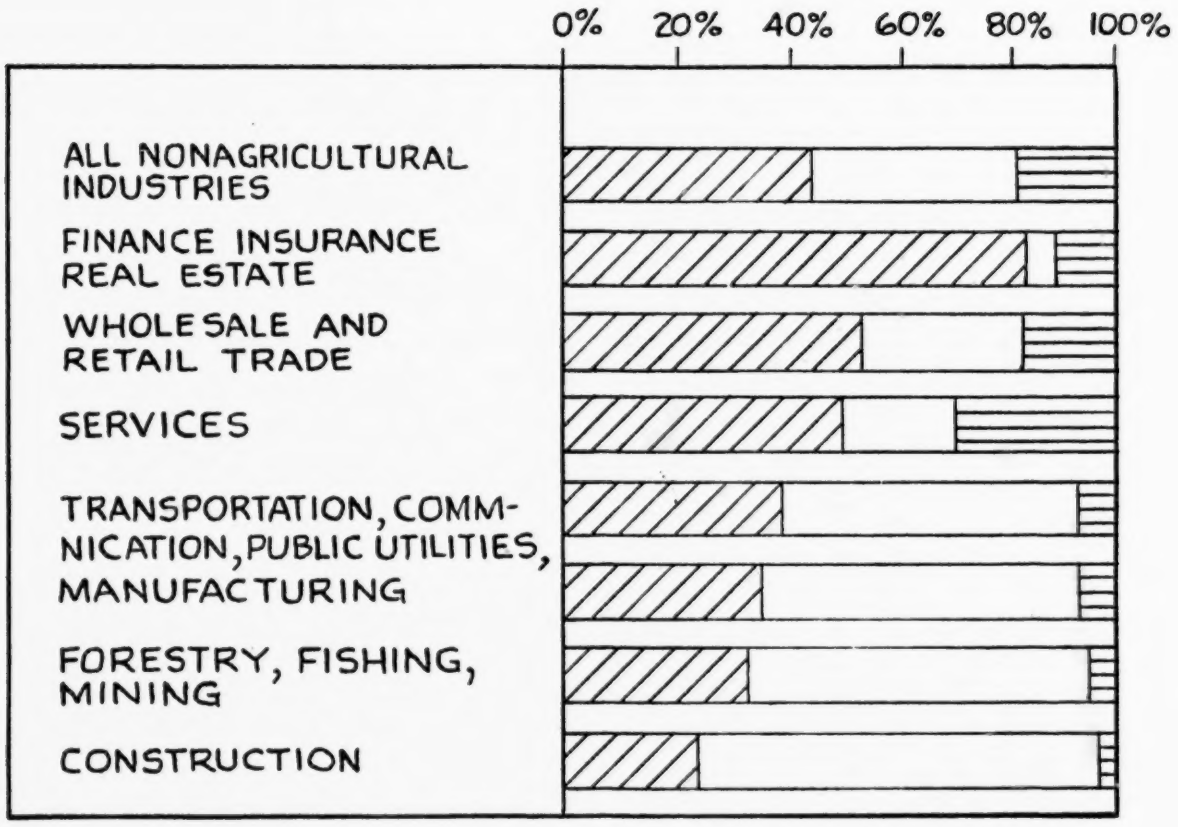
a. a shortage of trained workers
b. too many raw materials
c. fewer educational requirements for jobs
d. a longer work week
e. a greater demand for unskilled labor

W 49. According to the chart below, what can be said about the employment of workers by state governments?

a. it is rapidly increasing
b. it is rapidly decreasing
c. it is relatively stable
d. it is higher than local government
e. it is lower than federal government



W 50. According to the chart below, which industry employs the smallest proportion of blue-collar workers?



a. FINANCE, INSURANCE AND REAL ESTATE
b. WHOLESALE AND RETAIL TRADE
c. SERVICES
d. TRANSPORTATION AND COMMUNICATION
e. MANUFACTURING

DM 51. Selecting a job for which you are not qualified is an example of

a. a realistic choice.
b. an unrealistic goal.
c. a self-evaluation.
d. a realistic goal.
e. a statement of achievement.

DM 52. Taking a vocational course when you are planning to enter a trade is an example of

a. a realistic goal.
b. an unrealistic goal.
c. poor information.
d. a personal-social goal.
e. lack of achievement.

DM 53. If you had a college degree and liked to do creative work, which of the following jobs would probably suit you best?

a. accountant
b. real estate salesman
c. architect
d. medical technician
e. dietician

DM 54. If you wanted to be a real estate salesman, in which of the following courses should you do well?

a. machine shop
b. chemistry
c. biology
d. business
e. physics

DM 55. If you had good grades in commercial and business course, in which of the following would you probably do well?

a. medical technician
b. auto mechanic
c. machinist
d. registered nurse
e. postal clerk

DM 56. If you want a job with high status in your community, which of the jobs would be <u>most</u> likely to satisfy this goal?

a. postal clerk
b. lawyer
c. bookkeeper
d. bank teller
e. waiter

DM 57. Which of the following jobs requires a person to be good in mathematics and physics?

a. electronic engineer
b. lawyer
c. pharmacist
d. operating engineer
e. registered nurse

W 58. What information can help you select a high school course of study?

a. want-ads
b. interest inventories
c. achievement scores
d. job openings
e. all of the above

DM 59. If you wanted to earn a high salary, which of the following jobs would be <u>most</u> likely to satisfy this goal?

a. gas station attendant
b. dishwasher
c. medical technician
d. receptionist
e. electrical engineer

DM 60. In which of the following subjects should you do well if you wanted to be an appliance serviceman?

a. wood shop
b. electric shop
c. chemistry
d. physics
e. metal shop

DM 61. In which of the following courses should a person do well if he wanted to be a pharmacist?

a. history
b. geography
c. metal shop
d. chemistry
e. philosphy

DM 62. "I want to make lots of money on my job." This is an example of selecting a job on the basis of

a. achievement.
b. interest.
c. ability level.
d. salary.
e. vocational area.

S 63. Most of the actual decisions which junior high school students make are

a. educational.
b. vocational.
c. aesthetic.
d. religious.
e. social.

W 64. Name five jobs for which a college-preparatory course is required.

a. _____

b. _____

c. _____

d. _____

e. _____

W 65. Name five jobs for which training is offered in the vocational-technical school in your town.

a. _____

b. _____

c. _____

d. _____

e. _____

Project ABLE

September 1968

CAREER DEVELOPMENT INVENTORY

Part 2

Attitudes and Plans

Directions:

Listed below are a number of statements about occupational choice and work. Read each statement and decide whether you agree with it or disagree with it. If you AGREE or MOSTLY AGREE with the statement, fill in the circle under True on your Answer Sheet 2. If you DISAGREE or MOSTLY DISAGREE with the statement, fill in the circle under False on Answer Sheet 2. Erase completely any answer you may wish to change.

1. You have to know what you are good at, and what you are poor at before you can choose an occupation.

2. Ask others about their occupations, but make your own choice.

3. It's unwise to choose an occupation until you have given it a lot of thought.

4. Once you make an occupational choice, you can't make another one.

5. In making an occupational choice, you need to know what kind of person you are.

6. A person can do anything he wants as long as he tries hard.

7. Your occupation is important because it determines how much you can earn.

8. A consideration of what you are good at is more important than what you like in choosing an occupation.

9. Plans which are indefinite now will become much clearer in the future.

10. Your parents probably know better than anybody which occupation you should enter.

11. Work is worthwhile mainly because it lets you buy the things you want.

12. Work is drudgery.

13. Why try to decide upon an occupation when the future is so uncertain.

14. It's probably just as easy to be successful in one occupation as it is in another.

15. By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.

16. There are so many factors to consider in choosing an occupation, it is hard to make a decision.

17. Sometimes you can't get into the occupation you want to enter.

18. You can't go very far wrong by following your parent's advice about which occupation to enter.

19. Working in an occupation is much like going to school.

20. The best thing to do is to try out several occupations and then choose the one you like best.

21. There is only one occupation for each individual.

22. The most important consideration in choosing an occupation is whether you like it.

23. Whether you are interested in an occupation is not as important as whether you can do the work.

24. You get into an occupation mostly by chance.

25. It's who you know, not what you know, that's important in an occupation.

26. Choose an occupation which gives you a chance to help others.

27. Choose an occupation, then plan how to enter it.

28. Choose an occupation in which you can someday become famous.

29. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.

30. Choose an occupation which allows you to do what you believe in.

31. The most important part of work is the pleasure which comes from doing it.

32. It doesn't matter which occupation you choose as long as it pays well.

33. As far as choosing an occupation is concerned, something will come along sooner or later.

34. Why worry about choosing an occupation when you don't have anything to say about it anyway.

35. The best occupation is one which has interesting work.

36. I really can't find any occupation that has much appeal to me.

37. I have little or no idea of what working will be like.

38. When I am trying to study, I often find myself daydreaming about what it will be like when I start working.

39. If I have to go into the military, I think I'll wait to choose an occupation until I'm out.

40. When it comes to choosing an occupation, I'll make up my own mind.

41. I want to really accomplish something in my work--to make a great discovery or earn lots of money or help a great number of people.

42. As long as I can remember, I've known what I want to do.

43. I can't understand how some people can be so set about what they want to do.

44. My occupation will have to be one which has short hours and nice working conditions.

45. The occupation I choose has to give me plenty of freedom to do what I want.

46. I want an occupation which pays good money.

47. I often wonder how successful I'll be in my occupation.

48. I know which occupation I want to enter, but I have difficulty in preparing myself for it.

49. I know very little about the requirements of occupations.

50. I want to continue my schooling, but I don't know what courses to take or which occupations to choose.

51. I spend a lot of time wishing I could do work that I know I cannot ever possibly do.

52. I'm not going to worry about choosing an occupation unt l I'm out of school.

53. If I can just help others in my work, I'll be happy.

54. I guess everybody has to go to work sooner or later, but I don't look forward to it.

55. I often daydream about what I want to be, but I really don't have an occupational choice.

56. The greatest appeal of an occupation to me is the opportunity it provides for getting ahead.

57. Everyone seems to tell me something different--until now I don't know which occupation to choose.

58. I have a pretty good idea of the occupation I want to enter, but I don't know how to go about it.

59. I plan to follow the occupation my parents suggest.

60. I seldom think about the occupation I want to enter.

Directions:

These questions are about you and your plans for the future. This is not a test, and there are no right or wrong answers. Answer each question sincerely as it applies to you.

Read each question carefully. On the answer sheet, fill in the circle under the letter that answers the question for you.

61. Do you think you will quit high school before you graduate?

a. I will leave.
b. I am likely to leave.
c. I will not leave.
d. I don't know.

62. After you leave high school, what do you plan to do?

a. get a job
b. go to vocational, technical, or business school
c. go to junior college
d. go to college
e. I don't know.

IF YOU ARE NOT PLANNING TO ENTER COLLEGE, SKIP TO QUESTION 76. IF YOU ARE PLANNING TO ENTER COLLEGE, ANSWER QUESTIONS 63 TO 75, AND THEN SKIP TO QUESTION 90.

63. When do you plan to start college?

a. right after high school
b. after completing military service
c. after I have worked for a few years
d. My plans are not definite.

How important is each of the following as a reason for going to college? For items 64 through 75, fill in your answers as follows:

a. important
b. unimportant
c. don't know

64. A college degree is necessary for the kind of work I want to do.

65. My father wants me to go to college.

66. My mother wants me to go to college.

67. I would be able to earn more money as a college graduate.

68. I want to learn more about the careers I might enter.

69. I want to meet the kind of person I would like to marry.

70. I enjoy learning.

71. My teachers think that I should go to college.

72. I expect to get into college athletics.

73. Many of my friends are going to college.

74. I want to participate actively in college social life.

75. I want to make good personal contacts for business or an occupation.

IF YOU ARE PLANNING TO ENTER COLLEGE, SKIP TO QUESTION 90. IF YOU ARE NOT PLANNING TO ENTER COLLEGE, BEGIN HERE WITH QUESTION 76.

How important is each of the following as a reason for not going to college? For items 76 through 89, fill in your answers as follows:

a. important
b. unimportant
c. don't know

76. A college education would not help me to do the things I am most interested in.

77. I want to get a job and start earning a living as soon as possible.

78. I need to start earning a living in order to support myself.

79. It would cost more than my parents could afford.

80. It would cost more than my parents are willing to pay.

81. I would rather get married.

82. My high school grades are too low.

83. I don't like to study.

84. I don't think I have the ability.

85. It would cost more than it is worth to me.

86. My mother does not want me to go.

87. My father does not want me to go.

88. Most of my friends will not go to college.

89. I probably would not use a college education on a job.

90. How much education do your parents or guardians want you to have?

a. They don't care whether I stay in school.
b. high school only
c. vocational school, business school, or junior college
d. college degree
e. I don't know.

91. How much education are most of your friends planning to obtain?

a. They are planning to quit high school.
b. They are planning to complete only high school.
c. They are planning to obtain vocational school, business school, or junior college training.
d. They are planning to obtain four-year college training.
e. I don't know.

92. How many different occupations have you seriously considered entering?

a. none
b. one
c. two or three
d. four or more

93. How definite is your present choice of an occupation?

a. I have made a definite choice.
b. I have made a likely choice.
c. I am undecided about my future occupation.

94. What grade were you in when you decided upon your present choice of an occupation?

a. I have not decided upon an occupation.
b. sixth grade or earlier
c. seventh or eighth grade
d. ninth grade

FOR ITEMS 95 THROUGH 100: How important will each of the following be to you in choosing a job? Write in your answers as follows?

a. important
b. unimportant
c. don't know

95. Good income

96. Job security and permanence

97. Work that seems important to me

98. Freedom to make my own decisions

99. Opportunity for promotion and advancement in the long run

100. Meeting and working with sociable, friendly people

FOR ITEMS 101 THROUGH 106: Imagine that you have been working for an employer for several years. How important would each thing be in influencing you to quit and get a new job? Write in your answers as follows:

a. important
b. unimportant
c. I don't know.

101. If I could get better pay at another place

102. If the work was not interesting enough

103. If I could do more important work elsewhere

104. If I had a poor supervisor

105. If I didn't like my co-workers

106. If I did not receive expected promotions or salary increases

107. What three jobs would you like to have someday? Write your first, second, and third choice on the answer sheet.

APPENDIX B

SUMMARY OF TEST SCORES

Experimental Group (Quincy) n = 264

		Mean	S.D.	Maximum	Minimum	Range
Self Evaluation	Pretest	13.6780	3.6196	22	1	21
	Posttest	14.3674	4.4625	23	2	21
World of Work	Pretest	12.4697	4.3845	22	1	21
	Posttest	13.3485	4.9268	25	1	24
Decision Making	Pretest	8.6553	2.9221	14	0	14
	Posttest	8.7386	3.4082	14	1	13
Total for General Vocational Capabilities	Pretest	34.8030	9.4908	56	3	53
	Posttest	36.4545	11.4526	59	9	50
J.O. Crites	Pretest	34.7083	5.3389	52	19	33
	Posttest	34.2045	5.2078	47	21	26

Control Group n = 264

Self Evaluation	Pretest	14.3447	3.8090	23	3	20
	Posttest	16.0492	3.4056	24	2	22
World of Work	Pretest	13.1402	4.0994	24	4	20
	Posttest	15.6780	4.0508	24	5	19
Decision Making	Pretest	9.3220	2.6988	14	1	13
	Posttest	10.3526	2.4058	14	2	12
Total for General Vocational Capabilities	Pretest	36.8069	9.1724	59	14	45
	Posttest	42.0795	8.5986	62	14	48
J.O. Crites	Pretest	35.0606	5.3348	47	18	29
	Posttest	35.9205	4.8660	48	20	28

ATTITUDES AND PLANS

Chi Square Values — Deviation, by Item, of Mean of Experimental Group from Mean of Control Group on Pretest and Posttest.

Item		Chi Square
1	Pretest	2.3383
	Posttest	9.4089
2	Pretest	7.7338
	Posttest	11.5733
3	Pretest	3.9104
	Posttest	14.7463
4	Pretest	.9339
	Posttest	3.8359
5	Pretest	.8591
	Posttest	3.2212
6	Pretest	2.9276
	Posttest	3.0210
7	Pretest	3.3538
	Posttest	5.4942
8	Pretest	.6233
	Posttest	6.6346
9	Pretest	.9516
	Posttest	7.3440
10	Pretest	1.5820
	Posttest	5.2344
11	Pretest	4.8792
	Posttest	10.3467
12	Pretest	3.4793
	Posttest	7.9045
13	Pretest	2.5594
	Posttest	2.4282
14	Pretest	5.6878
	Posttest	4.9127
15	Pretest	2.7770
	Posttest	3.5941
16	Pretest	6.4339
	Posttest	2.6616
17	Pretest	4.5221
	Posttest	10.8856
18	Pretest	5.1436
	Posttest	5.8098
19	Pretest	4.3617
	Posttest	3.6557

Item		Chi Square
20	Pretest	4.9955
	Posttest	5.3896
21	Pretest	10.6372
	Posttest	6.3919
22	Pretest	3.4909
	Posttest	3.4251
23	Pretest	6.7089
	Posttest	5.4127
24	Pretest	4.1418
	Posttest	3.9812
25	Pretest	4.0277
	Posttest	4.3500
26	Pretest	8.8226
	Posttest	4.9568
27	Pretest	7.0377
	Posttest	4.7501
28	Pretest	4.7617
	Posttest	3.3054
29	Pretest	11.7289
	Posttest	5.4032
30	Pretest	5.6802
	Posttest	5.6772
31	Pretest	8.8310
	Posttest	3.5535
32	Pretest	1.8021
	Posttest	3.2806
33	Pretest	2.0797
	Posttest	2.1533
34	Pretest	.9080
	Posttest	1.9205
35	Pretest	4.9913
	Posttest	6.4164
36	Pretest	2.3791
	Posttest	10.1736
37	Pretest	4.1681
	Posttest	6.6825
38	Pretest	4.6119
	Posttest	9.5004
39	Pretest	.9996
	Posttest	5.8502

Item		Chi Square
40	Pretest	4.8632
	Posttest	7.0684
41	Pretest	.1808
	Posttest	3.9411
42	Pretest	5.9584
	Posttest	7.3934
43	Pretest	4.6103
	Posttest	1.8768
44	Pretest	2.4305
	Posttest	5.4814
45	Pretest	3.5441
	Posttest	6.3715
46	Pretest	4.7091
	Posttest	5.4929
47	Pretest	33.7646
	Posttest	22.2868